Design and specifications are subject to change without notice.

P/N:3810-0104C Rev 0 06/03



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Honeywell



HD73 Series

Operation Manual

Vandal-Resistant Dome Camera

READ AND KEEP THIS OPERATION MANUAL

CCD Digital COLOR

www.honeywellvideo.com

. User Information

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION! TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Explanation of two Symbols

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance-(servicing) instructions in the literature accompanying the appliance.

THE GRAPHIC SYMBOLS WITH SUPPLEMENTAL MARKING ARE ON THE BOTTOM OF THE SYSTEM.

"WARNING-TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THE UNIT TO RAIN OR MOISTURE"

INFORMATION

This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

WARNING

The manufacturer could void the user's authority to operate the equipment.

CAUTION - To prevent electric shock and risk of fire hazards:
- Do NOT use power sources except for that specified.
- Do NOT expose this appliance to rain or moisture.

This installation should be made by a qualified service person and should abide to all local codes.

. Contents

- **Thank you for purchasing this COLOR VIDEO CAMERA.**

Before using this camera, please read this operation manual carefully to obtain the best result and keep this manual for future reference.

1. SAFETY INSTRUCTIONS

Read Instructions
Read all of the safety and operating instructions before using the product.

Retain Instructions
Save this instructions for later use.

Cleaning
Unplug this appliance from wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

Water and Moisture.
Do not use this product near water or moisture. (For example. near a bathtub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool,etc)

Installation
Do not place this product on an unstable cart, stand, or table. The product may fall causing serious injury to a child or adult, and damage to the product.
Use only with a cart or stand recommended by the manufacturer, or sold with the product.
Mounting should follow the manufacturer's instructions, and should use a mounting accessory recommended by manufacturer.

Power source
This product should be operated only from the type of power source indicated on the marking label.
If you are not sure of the type of power supplied to your home, consult your dealer or local power company.

2. PRECAUTIONS

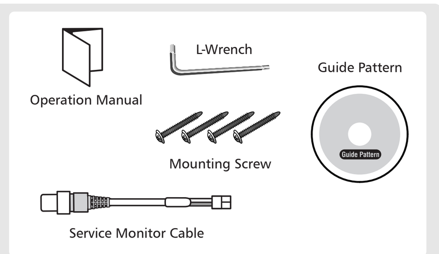
Handling
- Do not disassemble the camera and never touch parts inside the camera.
- Do not drop the camera or subject it to shocks and vibrations to avoid possible damage.
- When attaching or removing the lens, handle with care in order to that moisture and dust do not enter the camera.

Installation and storage
- Do not point the camera at the sun. This could damage the camera whether it is operating or not.
- Do not install the camera where the temperature could exceed the allowable range.
- Be sure the ambient temperature is less than 40℃ in installation intended for long term continuous operation.
- Avoid installing in a humid or dusty place.
- Avoid installing in places where there are strong magnetic fields and electric signals.
- Avoid installing in places where the camera would be subject to strong vibrations.
- Never expose the camera to rain and water.

3. FEATURES

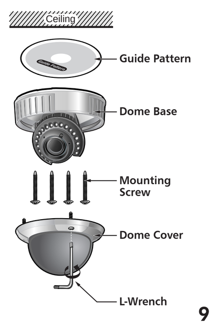
- **High Sensitivity 1/3 Inch Sony Super HAD CCD**
- **Min. Illumination (F1.2, 30 IRE)** : 0.3 Lux (Color)
  0.0 Lux (IR LED On)
- **Day & Night (ICR)**
- **OSD (On Screen Display)**
- **High Performance Menus For Functions**
  - Privacy Zone Selectable (4 Programmable Zone)
  - Motion Detection Selectable (64 Programmable Zone)
  - Sharpness Enhanced Adjustable
  - Flickerless Selectable
  - Gamma Enhanced Selectable
  - BLC Zone Selectable (64 Programmable Zone)

4. COMPOSITION

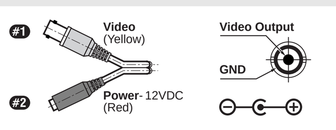


5. INSTALLATION

1. Stick the guide pattern on the wall or ceiling.
2. Drill four holes according to the guide pattern then insert anchors into the drilled holes.
3. Draw out power / video wires to the connecting places.
4. Fixed the camera to a celling using four screws.
5. Adjust desired focus and scene by turning and moving the 3-axis camera bracket by hand.
6. Put the dome cover over the base.
7. Fix the dome cover on the base by L-Wrench.



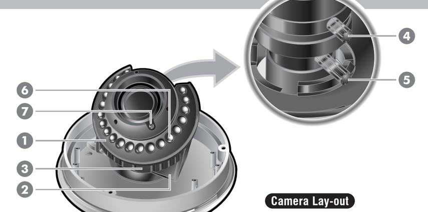
6. CONNECTION



- The wire is polarized.
- Use 12V DC ⎓ power source.

No.	Function	Terminal Color	Remark
#1	Video Output	Yellow	1.0 Vp-p
#2	Power Input	Red	12VDC (10V~15V), 360mA (Max)

7. NAME AND FUNCTIONS

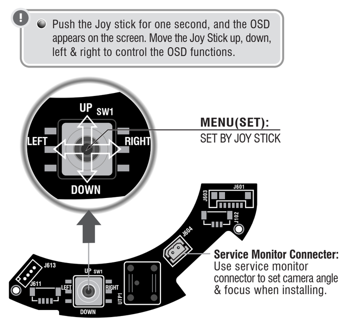


1. **Tilt rotation:** Adjusting the vertical angle.
2. **Pan rotation:** Adjusting the horizontal angle.
3. **Horizontal rotation:** Adjusting the horizontal position of the screen.
4. **Focus handle:** Focus (Far or Near)
5. **Zoom handle:** Zoom (Tele or Wide)
6. **IR LED(3.8mm~9.5mm):** 850nm/ 30°(20EA), Power Consumption(4.5W)
7. **Sensor**

8. OPERATING CAMERA

SETUP MENU					
CAMERA ID	• ON		• OFF		
LENS	• MANUAL		• VIDEO		• DC
SHUTTER	• AUTO	• FLK		• FIXED	• MANUAL
WHITE BAL.	• ATW	• AWB		• FIXED	• MANUAL
FUNCTION	• BLC		• AGC		• PRIVACY
	• MIRROR		• GAMMA		• MOTION
ADJUST	• CONTRAST		• SHARPNESS		
	• CB_GAIN		• CR_GAIN		
LANGUAGE	• ENGLISH	• KOREAN	• CHINESE1	• CHINESE2	• JAPANESE
RESET					
EXIT					

- Push the Joy stick for one second, and the OSD appears on the screen. Move the Joy Stick up, down, left & right to control the OSD functions.



SETUP
- **Push and hold MENU button 1 second to access the setup mode.**
  - **Select the status using the joystick. (up, down, left, right)**

SETUP
CAMERA ID OFF
LENS DC ⁄
SHUTTER FIXED ⁄
WHITE BAL. ATW
FUNCTION ⁄
ADJUST ⁄
LANGUAGE ENGLISH
RESET ⁄
EXIT

1. **Press MENU button, then SETUP mode is activated.**
   - MAIN SETUP menu is displayed on the monitor.
2. **Select OSD item using UP, DOWN button.**
3. **Set details using LEFT, RIGHT button.**
4. **Select "Exit" and then press the MENU button to finish the SETUP (Save and Exit)**

SETUP
CAMERA ID OFF
LENS DC ⁄
SHUTTER FIXED ⁄
WHITE BAL. ATW
FUNCTION ⁄
ADJUST ⁄
LANGUAGE ENGLISH
RESET ⁄
EXIT

1) CAMERA ID setup (default setting OFF)
① Press MENU key in ON ⁄ state. (Access ID setting MODE)
② Press MENU key in CAMERA ID.
③ Character is changed each time UP, DOWN is pressed. (Can select up to 63 letters)
④ Press MENU button in ⁄ to exit from ID setup mode
⑤ Press MENU button in 'C' to correct and erase the chosen entry.

ID SETUP
CAMERA ID
A ⁄ C
POSITION
RETURN

2) POSITION setup. Press POSITION ⁄.
① Move the character using UP, DOWN, LEFT, RIGHT button.
② Press Menu button to confirm selection of the character.
③ Press Return to go to previous screen. ID is displayed by pressing EXIT on MAIN MENU.

1) LENS setup
① Press LEFT or RIGHT button in LENS on Main Menu to select the mode to MANUAL ◀ ▶ VIDEO ◀ ▶ DC ⁄.

- **Setting Mode : DC ⁄**

2) DC LENS setup
① Press MENU button in DC ⁄ to display the screen on the right side.
② Use LEFT, RIGHT button to change BRIGHTNESS(IRIS LEVEL) value.
③ Press MENU button to return to the previous screen.

LENS DC
BRIGHTNESS 056
⁄ : RETURN

1) SHUTTER setup (for LENS MANUAL)
① Press LEFT or RIGHT button in SHUTTER to select the mode to AUTO ⁄ ◀ ▶ FLK ◀ ▶ FIXED ⁄ ◀ ▶ MANUAL ⁄.

- **Setting Mode : FIXED ⁄**

SHUTTER AUTO
BRIGHTNESS 056
⁄ : RETURN

1) FIXED ⁄ setup (MANUAL,DC,VIDEO LENS)
① Press MENU button in FIXED ⁄ to display the screen on the right side.
② Press LEFT or RIGHT button in SHUTTER. Can be set in ([NTSC: 1/60 ~ 1/100,000] [PAL: 1/50 ~ 1/100,000]) range.

SHUTTER FIXED
SHUTTER M : 1/60
⁄ : RETURN

1) WHITE BALANCE setup
① In WHITE BAL., press LEFT, RIGHT button to select the mode you wish to operate ATW ◀ ▶ AWB ◀ ▶ FIXED ⁄ ◀ ▶ MANUAL ⁄.

2) FIXED ⁄ setup
① Can set from MODE 1 to MODE 4.

3) MANUAL ⁄ setup
① As shown on the lower right picture, set Red and Blue color value temperature.
② Press MENU button in RETURN to exit from setup mode.

AWB FIXED
AWB FIXED : MODE 1
⁄ : RETURN

AWB MANUAL
RED 113
BLUE 255
⁄ : RETURN

1) FUNCTION ⁄ setup
① Press MENU button in FUNTION to show the OSD display on the right.

2) Select item using UP, DOWN button.

3) Set details using LEFT, RIGHT button.

4) Click "Return" to go to MAIN SETUP

FUNCTION
BLC OFF
AGC ON ⁄
PRIVACY OFF
MIRROR OFF
GAMMA 0.45
MOTION OFF
RETURN

1) BLC SETUP MODE
① Press MENU button in BLC ON ⁄ , to display the screen on the right side.

2) BLC AREA ⁄ setup
① Use UP, DOWN, LEFT, RIGHT button to move the AREA setup position.
② Set or release BLC AREA using MENU button.
③ Press MENU button for more than 1 second to move to BLC AREA MODE.

BLC SETUP
BLC AREA ⁄
BLC RATIO 16
RETURN

1) BLC AREA MODE
① Exit from BLC AREA MODE to move to BLC SETUP MODE screen.

2) BLC OSD description
① ***ALL CLEAR*** - Clear all set AREA
② ***ALL SET*** - Set all 64 BLC AREA
③ ***RETURN*** - Return to BLC AREA setup mode.
④ ***EXIT*** - Save AREA and return to BLC SETUP MODE.

BLC AREA
ALL CLEAR
ALL SET
RETURN
EXIT

1) BLC RATIO setup (BLC LEVEL value setup)
① Use UP,DOWN button to move to BLC RATIO.
② Use LEFT, RIGHT button to change BLC LEVEL value (0~63) 0:MIN , 63:MAX
③ Press MENU button in RETURN to move to FUNCTION MODE.

BLC SETUP
BLC AREA ⁄
BLC RATIO 16
RETURN

1) AGC setup
① AGC default setting ON ⁄
② Press MENU button in ON ⁄ to display the screen on the right side.
③ Use LEFT, RIGHT button to adjust AGC GAIN value (0~255) 0:MIN , 255:MAX
④ Press MENU button to return to the previous screen.

AGC CONTROL
AGC GAIN 095
⁄ : RETURN

1) PRIVACY setup
① Default setting OFF - Use LEFT,RIGHT button. Change setup to ON ⁄ mode.
② After ON ⁄ mode setup, 4 AREA groups are configured as displayed on the right-side picture.
③ Press MENU button. Details of each area is dsplayed.

2) PRIVACY details setup
① Select AREA SEL - PRIVACY 0~3.
② AREA STATE - 0~3 AREA ON/OFF
③ LEFT - Change left portion of each AREA size.
④ RIGHT - Change right portion of each AREA size.
⑤ TOP - Change top portion of each AREA size.
⑥ BOTTOM - Change bottom portion of each AREA size.
⑦ COLOR - Change entire color of the AREA (16 COLOR)

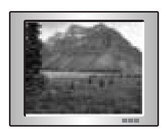
FUNCTION
BLC ON ⁄
AGC ON ⁄
PRIVACY ON ⁄
MIRROR OFF
GAMMA 0.45
MOTION OFF
RETURN

PRIVACY
AREA SEL AREA 0
AREA STATE ON
LEFT 017
RIGHT 058
TOP 020
BOTTOM 055
COLOR 001
RETURN

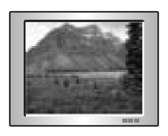
1) MIRROR setup
① MIRROR default setting OFF ON setting - Use LEFT, RIGHT button.
② Left and Right side is switched as shown on the picture.

FUNCTION
BLC OFF
AGC ON ⁄
PRIVACY OFF
MIRROR OFF
GAMMA 0.45
MOTION OFF
RETURN

OFF



ON



1) GAMMA setup (DEFAULT 0.45)
① In FUNCTION MODE, use UP, DOWN button to select GAMMA.
② Use LEFT, RIGHT button to adjust GAMMA value. (USER ◀ ▶ 0.05 ◀ ▶ 0.10 ◀ ▶ 0.15 ~ 1.0)

FUNCTION
BLC OFF
AGC ON ⁄
PRIVACY OFF
MIRROR OFF
GAMMA 0.45
MOTION OFF
RETURN

1) MOTION DETECTION setup
① DEFAULT value OFF
② In ON ⁄ , press MENU button.
③ Display MOTION details.

2) AREA ⁄ setup
① In AREA ⁄ , press MENU button. (see p.29)

3) MOTION TH. Setup
① Set motion sensitivity 0(MAX)~255(MIN)

4) MOTION TRACE setup
① ON : Display motion detection AREA.

- **Setting value can be adjusted using LEFT or RIGHT button.**

FUNCTION
BLC OFF
AGC ON ⁄
PRIVACY OFF
MIRROR OFF
GAMMA 0.45
MOTION OFF
RETURN

MOTION
AREA ⁄
MOTION TH. 037
MOTION TRACE OFF
RETURN

1) MOTION AREA setup
① Use UP, DOWN, LEFT, RIGHT button to move AREA setting position.
② Use MENU button to set and release AREA.
③ Press MENU button for more than 1 second to move to MOTION AREA MODE

2) MOTION AREA MODE
① You will return to MOTION AREA MODE after "Exit" from MOTION AREA MODE.

MOTION AREA
ALL CLEAR
ALL SET
RETURN
EXIT

1) MOTION OSD description
① ***ALL CLEAR*** - Release all set AREA
② ***ALL SET*** - Set all 64 MOTION AREA.
③ ***RETURN*** - Return to MOTION AREA Setup Mode.
④ ***EXIT*** - Save AREA and return to MOTION SETUP MODE.

1) ADJUST setup
① Press MENU button in ADJUST.
② Move to screen on the right side.

- **Each LEVEL value can be adjusted using LEFT, RIGHT button.**

2) CONTRAST setup
① Adjust Y-gain value (0~255)

3) SHARPNESS setup
① Adjust aperture value (0~31)

4) CB_GAIN setup
① Adjust COLOR CB_GAIN value (0~255)

5) CR_GAIN setup
① Adjust COLOR CR_GAIN value (0~255)

ADJUST
CONTRAST 083
SHARPNESS 12
CB_GAIN 190
CB_GAIN 205
RETURN

1) LANGUAGE setup
① DEFAULT value - ENGLISH
② After selecting LANGUAGE, change setting using LEFT or RIGHT button.
③ Choose the language mode you wish to operate in.

SETUP
CAMERA ID OFF
LENS DC ⁄
SHUTTER FIXED ⁄
WHITE BAL. ATW
FUNCTION ⁄
ADJUST ⁄
LANGUAGE ENGLISH
RESET ⁄
EXIT

- **ENGLISH ◀ ▶ Korean ◀ ▶ Chinese1 ◀ ▶ Chinese 2 ◀ ▶ Japanese**

1) RESET
① Select RESET. Press MENU button. The screen on the bottom appears.
② Select YES or NO.
③ Select YES to reset your camera to default factory condition

SETUP
CAMERA ID OFF
LENS DC ⁄
SHUTTER FIXED ⁄
WHITE BAL. ATW
FUNCTION ⁄
ADJUST ⁄
LANGUAGE ENGLISH
RESET ⁄
EXIT

LOAD DEFAULT
YES
NO

9. SPECIFICATIONS

MODEL	HD73	HD73X
Signal System	NTSC	PAL
Image Sensor	2:1 Interlace Transfer 1/3 Inch Super HAD CCD	
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
Video Output	Composite: 1.0Vp-p, 75Ω, Unbalanced	
Sync. System	Internal Sync	
Luminance S/N Ratio	More than 50dB (AGC OFF)	
Horizontal Resolution	530 TV Lines	
Min. Illumination (F1.2)	0.3 Lux(30IRE, AGC ON), 0 Lux(IR LED)	
Lens	DC Auto IRIS Vari-focal (f=3.8~9.5mm)	
Focus	Manual	
Electronic Shutter	1/60~1/100,000	1/50~100,000
White Balance	ATW (1,800°K~10,500°K) / AWB / Fixed / Manual	
Camera ID	ON / OFF	
Language	English / Korean / Chinese 1 / Chinese 2 / Japanese	

BLC, AGC	ON / OFF (Level Adjustable)
Day & Night	Auto (ICR)
Privacy	ON / OFF (4 Programmable Zone)
Mirror	ON / OFF (Horizontal)
Gamma	User / 0.5 ~ 1.0 Adjustable
Motion Detection	ON / OFF (64 Programmable Zone)
Contrast	0 ~ 255 (Level Adjustable)
Sharpness	0 ~ 31 (Level Adjustable)
Applicable Lens	DC Iris
Supply Voltage	12VDC (10V~15V)
Power Consumption	Max. 4.5W / 360mA
Operating Temperature	-10℃~+50℃ (Recommendation: -5℃~+40℃)
Storage Temperature	-20℃~+60℃
Dome Size (Ø)	100 mm
Weight	Approx. 844g

10. TROUBLESHOOTING

- If you have trouble operating your camera, refer to the following table. If the guidelines do not enable you to solve the problem, contact an authorized technician.

Problem	Solutions
Nothing appears on the screen.	• Check that the power cord and line connection between the camera and monitor are fixed properly. • Check that you have properly connected VIDEO cable to the camera VIDEO output jack.
The image on the screen is dim.	• Is lens stained with dirt? Clean your lens with soft, clean cloth. • Set the monitor to proper condition. • If the camera is exposed to too strong light, change the camera position. • Adjust the lens' focus properly.
The image on the screen is dark.	• Adjust the contrast feature of the monitor. • If you have an intermediate device, set the 75Ω/ Hi-z properly. • Adjust DC Level, on the OSD menu.
The camera is not working properly, and the surface of the camera is hot.	• Check that you have properly connected the camera to an appropriate power source.
The image on the screen flickers.	• Is the camera facing to direct sunlight or fluoresent lighting? Change the camera position.

. Memo